Combo Drive

CD-R 40X/CD-RW 12X/DVD 16X

User's Manual

CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASER KLASSE 1
LUOKAN 1 LASERLAITE
PRODUIT LASER
CATEGORIE 1

DANGER	INVISIBLE LASER RADIATION WHEN OPEN AVOID DIRECT EXPOSURE TO BEAM
VORSICHT	INSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETSEN
ATTENTION	RADIATION DU FAISCEAU LASER INVISIBLE EN CAS D'OUVERTURE. EVITER TOUTE EXPOSITION AUX RAYONS.

Copyright Statement

It is a criminal offence, under applicable copyright laws, to make unauthorised copies of copyright-protected material, including computer programs, films, broadcasts and sound recordings. This equipment should not be used for such purposes.

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC Warning Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FOR EUROPE

CE "The drive is in conformity with the EMC directive and low-voltage directive."

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INTRODUCTION

Features

Welcome to a multimedia world of CD-ReWritable technology and DVD-ROM capabilities. This high-performance combo drive combines CD-RW and DVD-ROM in one single drive which frees up precious bay space and presents you abundant function. It reads CDs of all types at maximum 40X speed, and DVD-ROMs at 16X speed maximum. For the writing ability, it writes to CD-Rs at up to 40X speed, and to CD-RWs at up to 12X speed. With the bundled software, you can enjoy the fun of creating customized audio and data CDs and the fascinating DVD entertainment of high resolution.

Here are some important features of this Combo Drive:

- EIDE/ATAPI Interface for easy installation
- 8X, 16X, 24X, 32X and 40X writing speed on CD-R media
- 4X, 8X, 10X and 12X writing speed on CD-RW media
- Adopts Buffer Underrun Prevention technology
- Supports writing modes of TAO, DAO, SAO and packet writing
- Large internal buffer: 2MB
- Supports MultiRead function
- Serves as RPC-2 DVD-ROM Drive
- Smooth DVD playback
- Low power consumption

System Requirements

For IBM compatible PCs, the system requirements recommended are as follows:

- PC sufficient to run Windows 95/98/Me or WindowsNT/2000/XP
- Pentium II 300MHz above with at least 64MB of memory
- Fast and sufficient hard disk space (minimum 150MB for installation, 1GB or more is recommended.)
- IDE host interface supporting ATAPI MMC command
- Microsoft Windows 95/98/Me or Windows NT/2000/XP

Package Contents

The package contains the following items:

- Combo drive
- Audio cable
- Application software disc
- A bag of screws

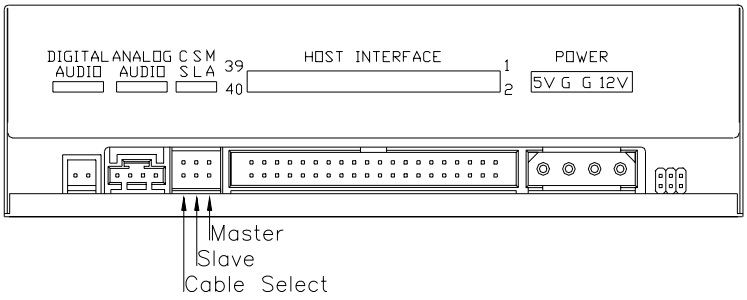
INSTALLATION

Host Interface Connections

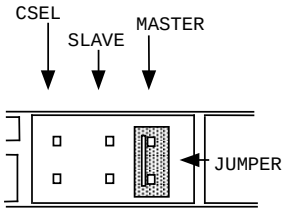
Most current mainboard models have two IDE ports (primary and secondary) which can connect two IDE cables. Two IDE cables allow you to connect up to four devices, but it is recommended that you separate IDE ports for your hard drive and your Combo drive. This will ensure that your hard drive's performance and speed won't be affected by having the Combo Drive on the same cable.

Jumper Setting

On the rear panel of the Combo Drive, you will find three pairs of jumpers: CS (CSEL), SL (Slave) and MA (Master). Use the jumper cap to set the device to CS, SL or MA mode corresponding to your PC configuration. If you connect only one device on the IDE cable, you can set the jumper as "Master" or "Slave".



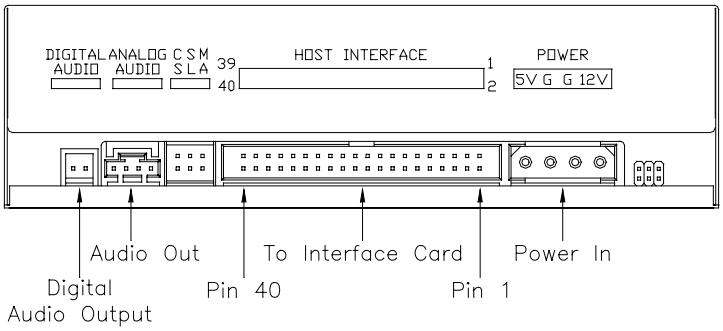
If you connect two devices on the same cable, set different jumper for each device (one as "Master", and the other one as "Slave"). The same rule goes for the connection of having your hard disk and one other device on the same cable.



Improper or conflicting setting will cause the unit not be detected by your system.

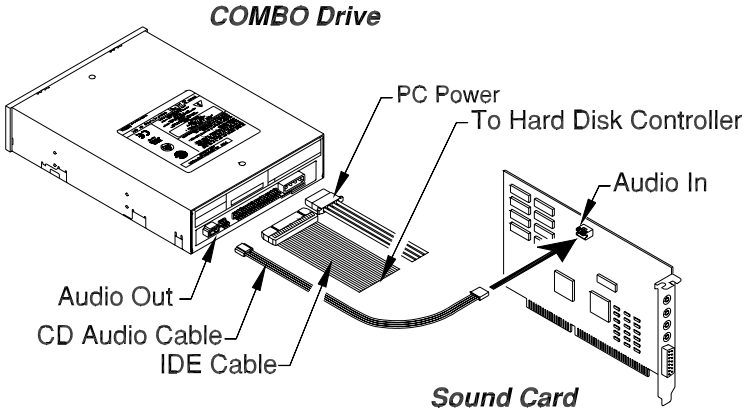
Hardware Installation

1. Turn off the power to your computer system and all peripheral devices.
2. Disconnect all cables and connectors from the back of your computer, and then remove the cover from the computer.
3. Insert the Combo Drive into one of the vacant 5.25" drive bays and secure it to your PC with all four mounting screws.
4. Connect one end of the 40-pin IDE cable to the IDE connector of the Combo Drive and the other end to the IDE port on your motherboard. Also, connect the power supply cable to the back of the drive.



☞ ***The red-edge of the IDE cable must be connected to Pin 1 on the Drive.***

5. If you have a sound card that can be connected to this drive, you can also connect the drive (as Audio-Out) and the sound card (as Audio-in) with a 4-pin audio cable.



If your mainboad is integrated with built-in sound system, plug the 4-pin audio cable into the CD-IN connector on the mainboard as Audio-in.

6. Re-attach the cover of the computer, and reconnect the power cord and all cables to the computer.

Driver Installation

For Windows Environment

This Combo Drive is a PnP device, and Windows 95/98/ME and Windows NT/2000/XP can **automatically detect** the drive and load the appropriate driver. If Windows cannot detect the drive, you can operate manually:

1. Click the **Control Panel** Icon in **My Computer** and then click **Add New Hardware**. The Add New Hardware window appears.

2. The program will automatically search for your new drive and load the appropriate driver.

Software Description

Burning Software

The bundled mastering software gives you the complete solution for making audio/data CDs right from your desktop. It allows you to copy files from your computer to a recordable compact disc. In addition, the audio CDs you create can be played in your home or car CD player. For the CD-RW media, you can write and erase data on the CD as you do with a floppy disk.

DVD Playback Software

The bundled DVD playback software has a newly enhanced MPEG-1 and 2 decoder to provide you with the most rich and powerful image quality. It is based on the proprietary MPEG-2 video decoding engine that supports full resolution 720 x 480 video playback. You can enjoy the wide range of educational and entertaining CD/DVD titles with sound and visual effect of theater quality.

Installation Under Windows Environment

1. Insert the application CD and the installation program will run automatically.

   Or

2. Run**:\setup.exe** on the application CD.

DVD Region Coding

Region Playback Control Management

All DVD Video Playback systems have “Region Playback Control” management (RPC) which is required by Hollywood movie industry and defined by DVD Forum. This includes DVD-Video players and PC

systems with DVD-Video capability. You can only play DVD-Video discs with the same region code as your DVD-Video Playback system.

As for DVD-ROM drives, one kind of the DVD-Video Playback system, there are 2 types:

RPC Phase 1 (as RPC1): RPC1 drives do not have built-in hardware support for region management. DVD-ROM drives of this kind don't play a part in controlling the playback region. It solely depends on the decoder.

RPC Phase 2 (as RPC2): RPC2 drives maintain the region change count information in hardware, and in general, the region of such drives can be changed up to 5 times by the end users under some software decoder (e.g. PowerDVD).

And referring to the region codes, there are 6 regions worldwide, and normally, there is a region code mark on the package of DVD titles. :

Region 1: Canada, US

Region 2: Japan, Europe, South Africa, and Middle East (including Egypt)

Region 3: Southeast Asia and East Asia (including Hong Kong)

Region 4: Australia, New Zealand, Pacific Islands, Central America, Mexico, South America, and the Caribbean

Region 5: Eastern Europe, Indian subcontinent, Africa, North Korea, and Mongolia

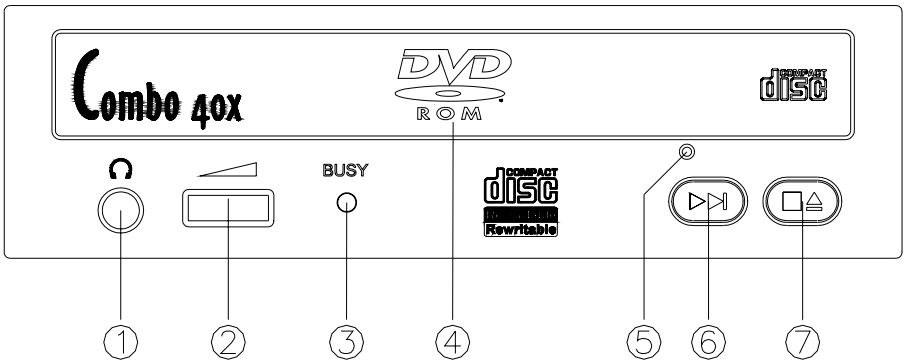
Region 6: China

About This Combo Drive

This Combo Drive is a RPC2 drive and according to DVD-Forum, PC chip must be designed into DVD-ROM drives to record how many times a user has changed the region code. Once the limit of 5 changes is reached, the drive won't allow you to change the region code any more. It means the code will be locked and only those DVD titles of the same region code could be played afterwards, so set the code carefully.

OPERATION & CONNECTION

Front Panel



1. Headphone Jack

By plugging in the stereo mini jack here, you can listen to an audio disc directly playing from the drive with headphones.

2. Headphone Volume Control

This rotary knob adjusts the volume level of the headphone output. Turning the wheel to the right will increase the audio volume.

3. Led Indicator

Orange LED for DVD series discs.
Green LED for CD family discs.
Red LED for data writing.

While the tray goes in/out, the indicator lights Green and it's off when the drive is ready.
The indicator flashes Green when the drive is reading an audio/data CD and it flashes Orange when it's reading DVD titles.

4. Disc Tray

This is the tray for the disc. Place the disc in the tray, then press the Close/Eject button or gently push the tray to close it.

5. Emergency Eject Hole

When the Eject/Close button can't work properly and the disc tray can't be opened, you can insert a paper clip or other small rod into this hole for manual ejection. Please make sure to power off the system before you do that.

6. Play/Skip button

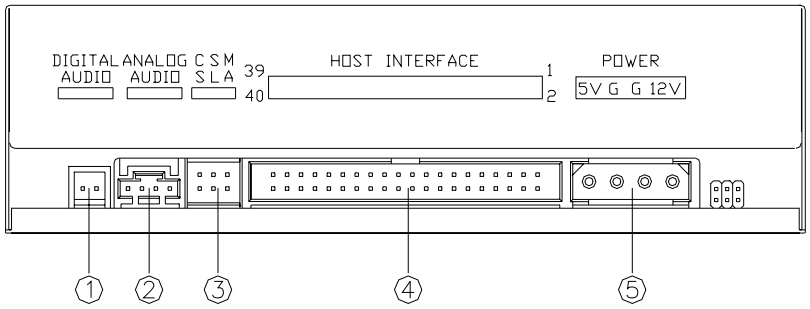
Press this button to play tracks or skip to next track during the playing state.

7. Close/Eject button

This button opens and closes the disc tray. If the tray is closed, pressing the button will eject it. If the drive is playing, pressing this button will stop playing.

☞ ***Note:*** *The design of front panel is subject to change without notice.*

Rear View



1. Digital Audio Output Connector

If your sound card has a digital audio IEC958 format connector, you can connect it to this digital audio output connector with a 2-pin audio cable.

2. Analog Audio Output Connector

This connector allows you to connect the drive to your sound card with a 4-pin audio cable.

3. Device Configuration Jumper

Set the jumper to Master, Slave or Cable Select according to your system configuration.

4. IDE Interface Connector

Plug one end of the 40-pin IDE cable here to join the 40-pin IDE connector on the motherboard. The red-edge of the IDE cable must be connected to Pin 1 of each connector.

5. Power Supply Connector

By plugging the computer's power supply cable here, you can connect the Combo Drive and your computer system.

TECHNICAL DATA

Performance	
Transfer rate	Read: CD: 6000kb/sec (up to 40X) DVD: 21632kb/sec (up to 16X) Write: CD-R: 6000kb/sec (up to 40X) CD-RW: 1800kb/sec (up to 12X)
Data buffer	2MB
Writing modes	TAO (Track at once), DAO (Disc at Once), SAO (Session at once), Multi-session, Incremental Packet Writing (fixed and variable packet size)
Writing speed	CD-R: 8X/16X/24X/32X/40X CD-RW: 4X/8X/10X/12X
Mechanism (physical spec.)	
Interface	E-IDE/ATAPI
Form factor	5.25" Half Height
Disc Loading	Tray (motorised)
Audio output level	Line out = 0.7 ± 10%Vrms Headphone out = 0.6± 10%Vrms
Power	5 VDC & 12VDC
Dimensions (WxDxH)	148.6 ± 0.2 x 193.3 ± 0.2 mm x 41.8 ± 0.2 mm
Weight max.	1 kg
Environment	
Temperature	Operating: 5°C to 45°C, Non-operating -20°C to 60°C
Humidity	Operating:8% ~ 80%RH, Non-operating 5% ~ 95%RH

Compact Disc

Disc Size	80mm and 120mm discs
Disc Data Capacity	DVD-ROM: Single layer – 4.7GB Dual layer – 8.5GB (one side) CD-ROM: 74min – 650MB – Mode 1 80min – 700MB – Mode 1

Disc Format Supported

	Write	Read
CD-DA	✓	✓
CD-ROM	✓	✓
CD-ROM XA	✓	✓
CD-EXTRA	✓	✓
Video CD	✓	✓
Photo CD	✓	✓
CD-I	✓	✓
CD-TEXT	✓	✓
DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18)		✓
DVD+RW, DVD-RW		✓

TROUBLESHOOTING

To help you get more familiar with the Combo Drive, the following FAQ lists some common problems you might encounter. Please read it for reference before you request RMA support from your dealer.

Q1. The drive cannot be recognized.

(1) It's possible the drive hasn't been connected properly. Please check whether the IDE cable and power connector are tightly connected.

(2) Check if there is jumper conflict. Normally, if 2 drives are connected with one IDE cable, the jumper has to separate one to MASTER & the other to SLAVE.

(3) If Windows can't detect this drive, click on the "Add New Hardware" in the Control Panel. Windows will start detecting.

Q2. Do I need to install driver for this Combo Drive?

No, because Windows 95/98/98Se/ME/2000/XP have IDE driver built in and you don't have to install another driver.

Q3. The drive can read data and audio discs, but it can't read DVD discs. Why?

Because Windows Operating System doesn't support the playback of DVD discs and you have to install another software to play DVD discs. (e.g.: Power DVD or Win DVD)

Q4. My external speaker doesn't have sound when playing music CD.

(1) Please check if the audio cable is connected to the audio connector properly.

(2) Check both rear side of the drive and sound card on M/B (If Audio chipset is on board). If they are well connected, check if the sound card is working.

Q5. The drive can't read former session(s) of the CD-R disc which has been written twice or more times.

Before writing CD-R discs with data copy, remember to choose "Import session" so as to read the former sessions.

Q6. There is noise while reading.

If the disc used is eccentric or there are labels stuck on the disc surface, it will cause noise.

Q7. The drive doesn't have power.

Please check if the power cord is connected securely.

Q8. The tray cannot be ejected.

There are two possible reasons:

(1) Need to be ejected by the application.
Some of the burning or playing application will lock the drive. You have to eject by the application and close it so as to restore the use of panel buttons.

(2) The CD is inserted incorrectly.
Please insert a paper clip or small rod into the emergency hole on the front panel for manual ejection.

Q9. The drive cannot read some general discs.

Please check if the disc has deep scratches, fingerprints, or other contaminants on the surface. Clean the disc if it's necessary.

Q10. The drive cannot write.

We suggest as follows:

(1) Use the burning software which is provided by original supplier and bundled with this Combo Drive or download the updated file from internet.

(2) More capacity of hard disk is needed if using hard disk as temporary buffer.

(3) Place the disc correctly.

(4) The blank disc needs full format first if using packet writing software.

Q11. "Buffer underrun" always occurs while writing discs.

Here are some suggestions:

(1) Close the screen saver & TSR (Terminate and Stay Resident).

(2) Quit other redundant application while burning.

(3) Select good quality and high-speed supported blank discs.

(4) Increase main memory capacity.

(5) Select other burning software.

(6) De-fragment the hard disk.

(7) Keep the source & destination discs clean. (no scratches, fingerprints or contamination.)

(8) Copy data as image file to hard drive to avoid buffer underrun.

(9) Keep the system clean. Do not install redundant driver or application to reduce system loading as well as confliction.

(10) Enable Buffer Underrun Protection mode if your software supports it.

Q12. Does this drive support over-burning?

Yes, but please use burning software which supports this function.

Q13. What burning software supports this Combo Drive?

Software such as Adaptec EasyCD Creator, Ahead Nero-Burning ROM, NTI CDMaker…etc.

Q14. Does this drive support CD-Text & SAO (Session At Once) function?

Yes, it does support CD-Text & SAO function and you may edit the title or content into your music CD.

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